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0000001

B

REMOVAL ACTION PLAN
FOR
AUTOMATIC INDUSTRIAL PLATING
U.S. EPA ID: PV
TDD: TO5-9112-026
PAN: EIL0763SAA

EPA Region 5 Records Ctr.



237104

JANUARY 10, 1992

Prepared by:

[Signature]

Date:

1/10/92

Reviewed by:

Michelle L. Parker

Date:

1/13/92

Approved by:

Thomas A. Rando

Date:

1/13/92



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International Specialists in the Environment

January 10, 1992

Mr. Duane Heaton
Deputy Project Officer
Emergency Support Section, HSE-5J
U.S. Environmental Protection Agency
77 W. Jackson St.
Chicago, IL. 60604

Re: Automatic Industrial Plating Company, Schaumburg, Illinois
TDD#: T05-9112-026

Dear Mr. Heaton,

On December 20, 1991, the United States Environmental Protection Agency (U.S. EPA) tasked the Technical Assistance Team (TAT) to conduct a site investigation of the Automatic Industrial Plating Company facility in Schaumburg, Illinois. The attached report provides details of the site inspection, sampling performed, analytical results, and a removal action plan with cost estimate.

Automatic Industrial Plating Company is a defunct electroplating company. The facility, which has been in operation since 1970, ceased operations in July, 1991. The site has been the subject of investigations by the Metropolitan Water Reclamation District of Chicago (MWRD) and the Illinois Environmental Protection Agency (IEPA). The site was referred to the U.S. EPA by the IEPA on December 19, 1991.

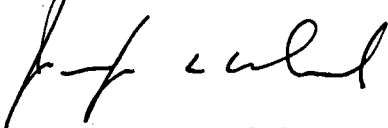
On December 20, 1991, TAT members Jennifer Wendel and Thomas Sedlacek conducted a site assessment at the Automatic Industrial Plating site. TAT was accompanied by U.S. EPA On-Scene Coordinator (OSC) Stavros Emmanouil, and IEPA representatives Edward Osowski and Donald Klopke. To characterize the possible contaminants on-site, TAT collected liquid and solid samples from five containers. Analysis of these samples indicate that materials possessing characteristics of hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA), are present at the Automatic Industrial Plating site. TAT Sedlacek video documented the existing condition of the facility. TAT then prepared an inventory and map of all containers located at the site.

At the request of OSC Emmanouil, TAT prepared an action plan for the removal of hazardous waste from the Automatic Industrial Plating Company facility. This proposed Removal Action Plan and associated cost estimate are included in the attached report.

Duane Heaton
January 10, 1992
Page 2

Should you have any questions or require additional information,
please feel free to contact us.

Sincerely,

A handwritten signature in dark ink, appearing to read 'J. Wendel', written over the printed name.

Jennifer Wendel
Environmental Chemist

ATTACHMENT

cc: S. Emmanouil, OSC

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1.0 SITE DESCRIPTION

The Automatic Industrial Plating site is located at 920 Morse Street in Schaumburg, Cook County, Illinois (Figure 1). The site is an inactive metal finishing facility approximately 0.5 acres in size and situated in a dense residential and commercial area of Schaumburg.

The site consists of one main building containing one plating line, an office, and locker room. Several containers, thought to be remnants of additional plating lines, remain scattered throughout the operations area of the building. Waste solids and liquids from previously performed plating operations have been consolidated into various size drums which are also scattered around the site (Figure 2).

2.0 SITE BACKGROUND

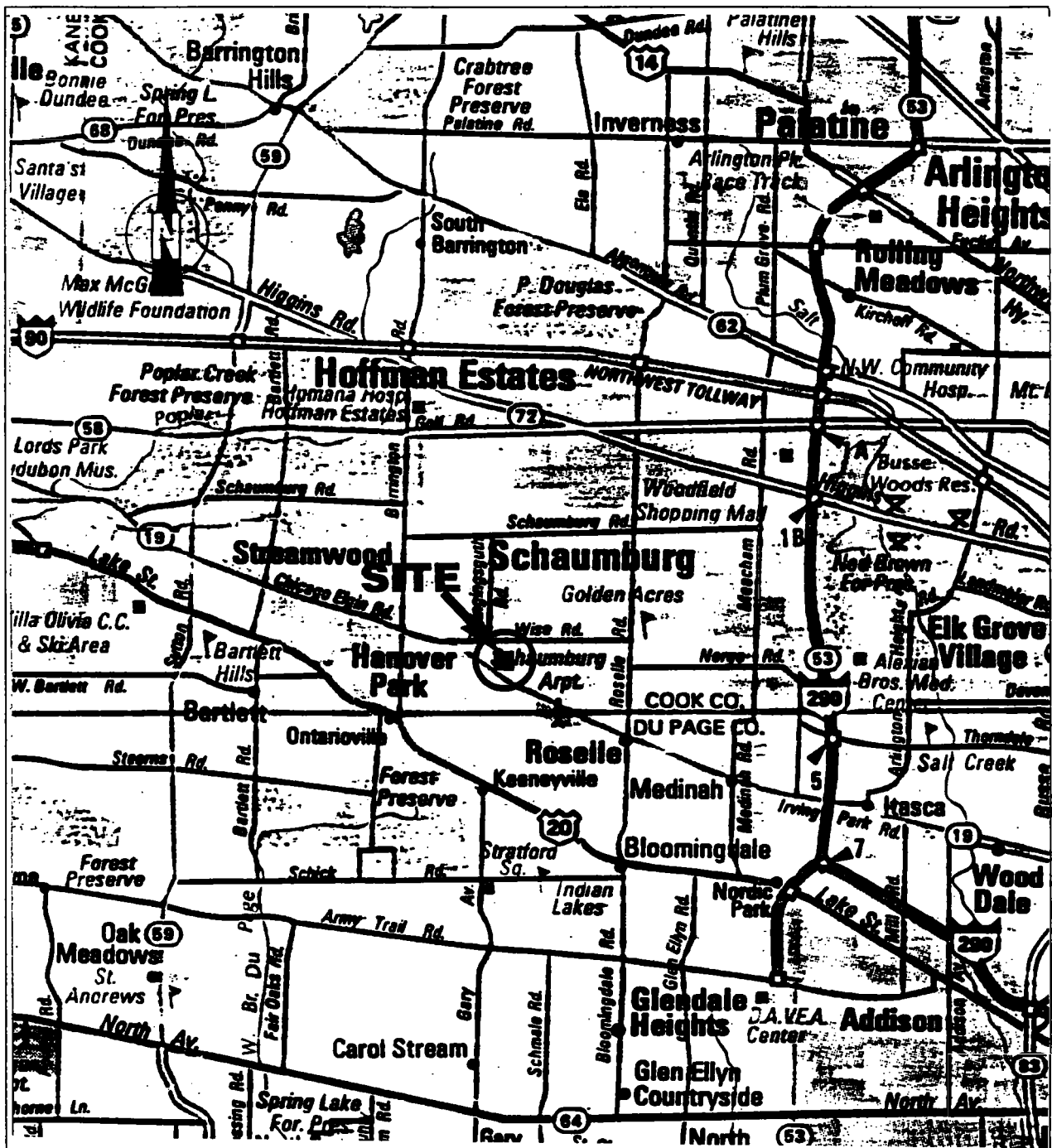
Automatic Industrial Plating Company is owned by Mr. Wolfgang Damsch and began operations on September 3, 1980, and ceased operations in July of 1991. Electroplating processes performed at the facility utilized copper, zinc, and chrome metals, and cyanide. In conjunction with the electroplating process, degreasing operations using volatile organics are believed to have been conducted at the facility.

In April of 1990, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) issued a notice of non-compliance for effluent from the Automatic Industrial Plating facility. In July of 1990 the MWRD issued a notice of violation for the detection of copper, zinc, chromium, nickel and lead in effluent from the site.

In May of 1991, the MWRD again issued a letter to the Automatic Industrial Plating Company requesting modification of the facilities spill prevention and control procedures. The company officially abandoned operations on July 20, 1991. The owner failed to respond to the requests of the MWRD and was issued a cease and desist notice in September, 1991.

Although the facility was not in operation, the MWRD continued to detect elevated levels of the above mentioned metals in effluent from the site. The district notified the owner who voluntarily sealed the drain systems from the building, and allowed MWRD personnel to conduct an inventory of materials stored on-site. Following their inspection, the MWRD informed the Village of Schaumburg of the conditions existing at the Automatic Industrial Plating Company.

On December 13, 1991, following a request from the village, the Illinois Environmental Protection Agency (IEPA) conducted an investigation of the Automatic Industrial Plating site.



ILLINOIS



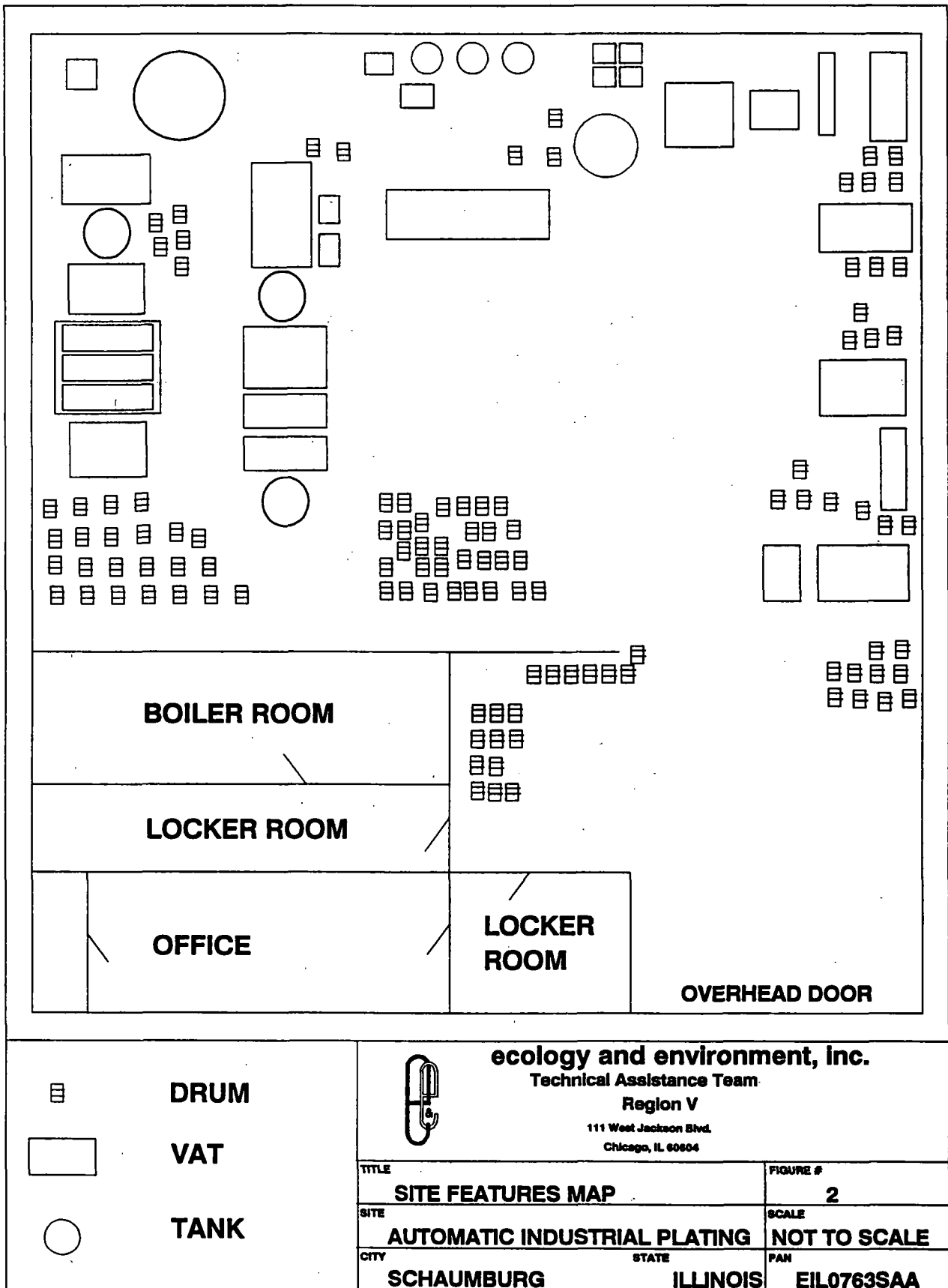
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Technical Assistance Team


Region V

111 West Jackson Blvd.
Chicago, IL 60604

TITLE SITE LOCATION MAP	FIGURE # 1
SITE AUTOMATIC INDUSTRIAL PLATING	SCALE 1:145000
CITY SCHAUMBURG	STATE ILLINOIS
	PAN EIL0763SAA



	DRUM
	VAT
	TANK



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 Chicago, IL 60604

TITLE		FIGURE #
SITE FEATURES MAP		2
SITE		SCALE
AUTOMATIC INDUSTRIAL PLATING		NOT TO SCALE
CITY	STATE	PAN
SCHAUMBURG	ILLINOIS	EIL0763SAA

Additional investigation and sampling of containers to determine the composition of waste on-site was conducted on December 18, 1991. The site was referred to the United States Environmental Protection Agency (U.S. EPA) Enforcement and Emergency Response Branch by the IEPA on December 19, 1991.

3.0 SITE ASSESSMENT

On December 20, 1991, the Ecology and Environment, Inc. (E & E) Technical Assistance Team (TAT) was tasked by the U.S. EPA to conduct a site assessment at the Automatic Industrial Plating facility.

Upon arrival at the site, TAT members Jennifer Wendel and Tom Sedlacek were met by U.S. EPA On-Scene Coordinator (OSC) Stavros Emmanouil and IEPA representatives Edward Osowski and Donald Klopke. IEPA representatives informed OSC Emmanouil of IEPA action at the site that week, and of the condition of the facility following their inspection.

TAT conducted air monitoring in the building in level B due to the presence of open vats and containers. An HNU photoionization detector, Hydrogen Cyanide monitox, and MSA 260 Oxygen/Explosive gas meter were used. No levels above background were observed on any of the instruments during air monitoring.

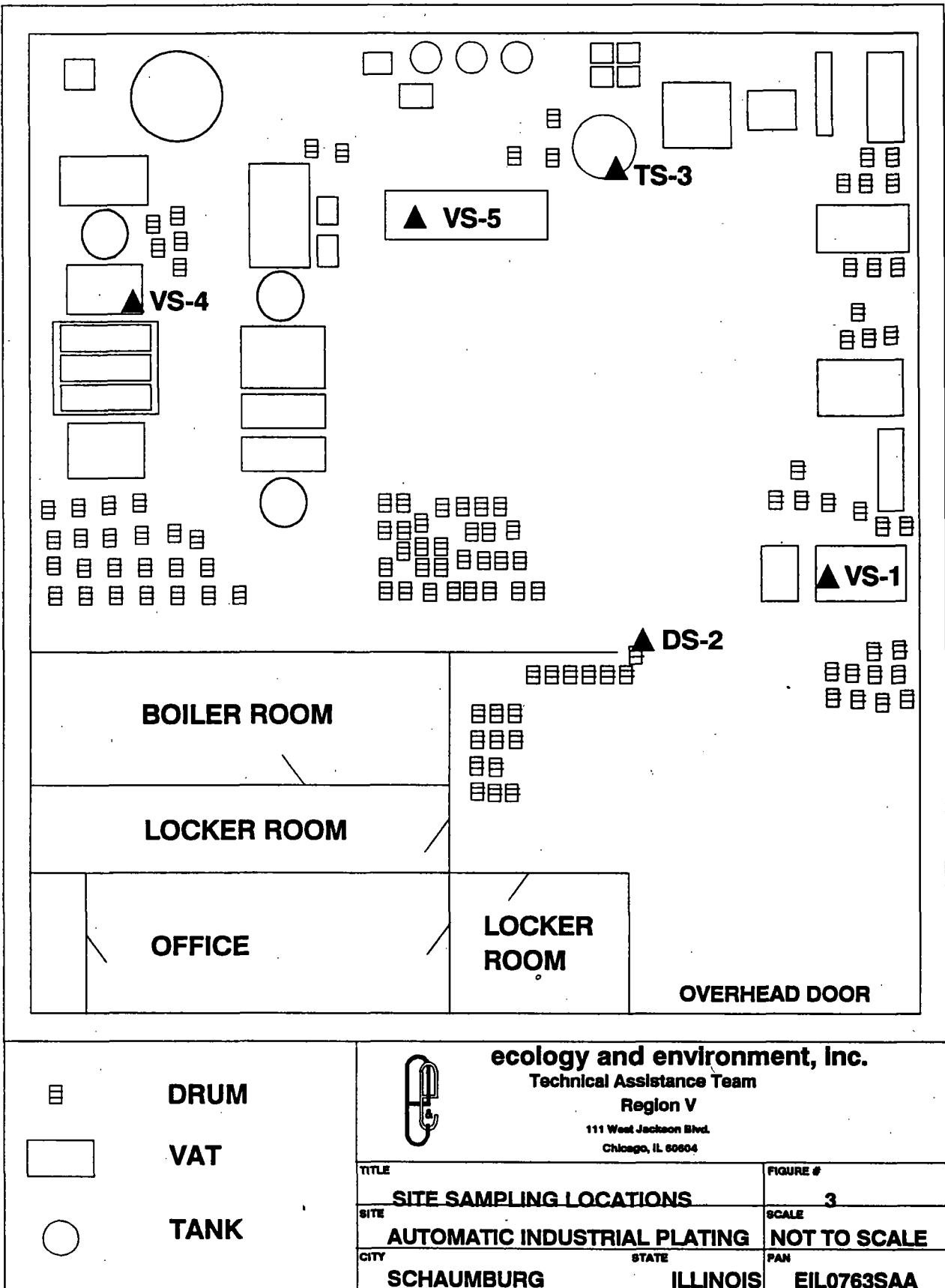
TAT conducted an inventory of all containers on-site. TAT observed approximately 130 drums and smaller containers of unknown content ranging from 5 to 55 gallons in capacity scattered throughout the building. Many of the drums were open top, rusted, and deteriorating. In the southwest corner of the building TAT documented approximately 23 unsecured drums stacked on top of one another. TAT inventoried 30 vats and tanks located throughout the building. One large tank was observed to be approximately 3/4 full of liquid with a pH of 1 Standard Unit (S.U.). This tank had a bottom drain pipe with a valve that appeared to be leaking. TAT noted a small pool of liquid and dried crystals had formed around the drain pipe. IEPA inspectors have estimated the capacity of this tank to be approximately 1,500 gallons. In the southwest corner of the building TAT observed the remaining plating operations area. There are 10 remaining vats in two lines in this area, most containing liquid. One full vat in the west line, approximately 200 gallons in capacity, registered a pH of 12 S.U., and was labeled "Hot Caustic". Adjacent to this vat was a vat labeled "Hard Chrome", with a pH of 1 S.U., that was 3/4 full, with a capacity of approximately 750 gallons. The remaining vats in this line were labeled "Rinse", and also registered a pH of 12 S.U. In the east side of the plating area there are four vats and two small tanks. The largest vat in this line is approximately 1,000 gallons and was labeled "Copper Cyanide". This vat did not contain any

liquid, however, TAT observed significant amounts of white, crystalline solids remaining in the vat. The remaining vats in the east line ranged from 200 to 400 gallons in capacity, and were full of liquid. At the time of the assessment, TAT noted that two of these vats appeared to be made of fiberglass and their contents were frozen and bulging the sides of the vats.

The cat-walk between the plating lines is made of wood and appeared deteriorated, with large holes in the boards of the floor. Several large holes were observed in the roof of the building, and at the time of the assessment TAT observed rain water leaking into the building in the area around the open vats. The concrete floor of the building is deteriorated and approximately 1 inch of sludge was noted on the floor around the vats in the plating operation area. TAT observed a large pool of liquid on the floor near the center of the building which registered a pH of 2 S.U.

TAT videotaped the current condition of the Automatic Industrial Plating facility at the request of the OSC. During videotaping TAT observed discoloration of the exterior brick on the outside of the western wall of the building. TAT documented yellow staining of the brick for approximately 12 inches above the ground. The most prevalent discoloration was discovered on the wall immediately behind one vat in the west plating line that is 3/4 full of a dark red/orange liquid.

TAT collected five samples for analysis, four liquid and one solid, from containers on-site. Sample VS-1 was collected from a vat on the eastern wall of the building containing a dark red liquid. TAT recorded a pH of 0-1 S.U. on the liquid. Sample DS-2 was collected from a 55-gallon drum near the center of the building that was labeled "Copper Cyanide Solution". The sample was a pale yellow liquid that registered a pH of 12 S.U. and resulted in a positive test for cyanide in a field wet chemistry test performed by TAT. Sample TS-3 was obtained from the green liquid contained in the large tank toward the north end of the building, and had a pH of 1 S.U. Sample VS-4 was taken from a vat in the west line of the plating operations area labeled "Hot Caustic", and was an opaque colorless liquid with a pH of 13 S.U. The last sample, VS-5, was taken from green solids remaining at the bottom of a large vat (approximately 2,000 gallons capacity) located toward the center of the building. Sample locations are identified in Figure 3. All samples were shipped to Ecology and Environment Analytical Services, Cheektowaga, New York, and were analyzed for total metals, total cyanide, reactive cyanide, and corrosivity (pH).



4.0 ANALYTICAL RESULTS

Results of TAT collected samples revealed the presence of heavy metals including antimony (5,800 ppm), chromium (360,000 ppm), copper (22,000 ppm), lead (170 ppm), nickel (14,000 ppm) and zinc (4,900 ppm). In addition, total cyanide was detected at a level of 49,000 ppm in sample DS-2, and pH results revealed a range from <1 S.U.(TS-3) to 14 S.U. (VS-4). The analytical data is summarized in Table 1.

5.0 THREAT TO HUMAN HEALTH AND THE ENVIRONMENT

Conditions at the Automatic Industrial Plating site that may warrant a removal action, as set forth in paragraph (b) (2) of Section 300.415 of the National Contingency Plan (NCP), include:

1. Actual or potential exposure to nearby populations, animals, or the food chain from hazardous substances or pollutants or contaminants;
2. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;
3. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;
4. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

5.1 POTENTIAL EXPOSURE TO HAZARDOUS SUBSTANCES

Site investigations by IEPA and TAT, and sample analytical data have identified that open drums and containers containing hazardous substances exist at the Automatic Industrial Plating site. Antimony, cadmium, chromium, copper, lead, mercury, nickel, zinc, and cyanide were found and pose inhalation, ingestion, and contact hazards. In addition, acid fumes emanating from the deteriorating facility threaten the surrounding residents with airborne exposure. Exposure to acid fumes can cause dermatitis and irritation to the respiratory system, nausea and dizziness. Electroplating sludges have spilled onto the floor, corroding concrete and walls of the facility. Close proximity of businesses and residences, and partially restricted access, allows for potential direct contact with hazardous materials.

TABLE I
RESULTS OF TAT COLLECTED SAMPLES#

Parameter (method)	VS-1 liquid (ppm)	DS-2 liquid (ppm)	TS-3 liquid (ppm)	VS-4 liquid (ppm)	VS-5 solid (ppm)	Method Detection Limit: liquid (ppm)	Method Detection Limit: solid (ppm)
Silver (ICP)	ND	ND	ND	ND	ND	1.0	1.0
Arsenic (FU)	0.53	0.34	0.34	0.35	ND	0.005	0.50
Barium (ICP)	6.5*	ND	24*	ND	ND	2.0	2.0
Beryllium (ICP)	1.4*	ND	ND*	ND	ND	0.05	0.50
Cadmium (ICP)	3.6*	ND	57*	ND	ND	0.50	0.50
Total Chromium (ICP)	360000	5.4	610	7.2	14	0.01	0.10
Copper (ICP)	22000	22000	770	220	68	0.02	2.0
Lead (FU)	170*	ND*	61	22	2.5	0.005	0.50
Mercury	0.00021	ND	ND	0.0032	ND	0.00020	0.10
Nickel (ICP)	14000	110	1700	ND*	130	0.02	2.0
Antimony (ICP)	5800*	ND	ND	ND	ND	0.60	6.0
Selenium (FU)	41*	ND	ND	ND	ND	0.50	0.50
Thallium (FU)	130*	ND	ND	ND	ND	0.50	0.50
Zinc (ICP)	4400	36	4900	100	540	0.01	1.0
Total Cyanide	ND	49000*	ND	ND	ND	0.50	50
Total Reactive Cyanide	ND	ND	ND	ND	ND	1.0	100
pH	3.0	14	<0.1	8.0	3.0	0.10	1.0

Analytical Draft Only. These results have not been subjected to the QA/QC program.

* The method detection limit for this result differs from the method detection limit given.

5.2 THREAT OF RELEASE

Site investigations by IEPA and TAT contractors have identified that approximately 160 containers, whose contents include chemicals or by-products used in metal plating processes, exist at the Automatic Industrial Plating site. Most of the drums (ranging from 5 to 55 gallons) and vats or tanks (ranging from 100 to 3,000 gallons) were open and unsecured, and of questionable integrity. In addition, analytical data from on-site samples revealed the presence of hazardous materials that could leak from their containers and contaminate their surroundings.

5.3 SOIL CONTAMINATION MIGRATION

Site investigations have documented that chemicals associated with the electroplating process have spilled from their containers and corroded the concrete floor of the Automatic Industrial Plating facility. A pool of liquid near the center of the building registered a pH of 2 S.U. In addition, the outside brick walls appear visibly stained near ground level. The migration of contaminants from the floor of the facility due to the dilapidated condition of the building, and from the exterior soils by airborne dusts or storm run-off, is possible.

5.4 WEATHER CONDITIONS

The roof of the building was observed to have holes and is deteriorating. Excessive snow or rain could cause significant leakage into the building resulting in migration of hazardous substances from unsound containers.

5.5 CHEMICAL HAZARDS OF CONTAMINANTS DOCUMENTED AT THE SITE

The following is a list of contaminants of potential concern documented at the Automatic Industrial Plating site. The contaminants were present in varying concentrations inside the facility; however, all are known hazards at the documented levels of detection.

Antimony; a toxic heavy metal with possible oral and inhalation route concern was detected in one sample from a container at the Automatic Industrial Plating site.

Cadmium; a potential inhalation route carcinogen and oral route toxic non-carcinogen detected in elevated concentrations in one container sample.

Chromium; a potential inhalation route carcinogen and toxic non-carcinogen of oral and inhalation route concern detected in all TAT collected samples.

Copper; a toxic non-carcinogen with inhalation and oral exposure potential found in all TAT collected samples.

Lead; a toxic non-carcinogen of oral and inhalation exposure potential detected in four samples.

Mercury; a toxic carcinogen of oral and inhalation route concern found in one vat sample on-site.

Nickel; a potential carcinogen with inhalation and oral exposure route potential detected in four container samples.

Zinc; a toxic non-carcinogen with oral and inhalation route concern detected in all five TAT collected container samples.

Cyanide; a toxic non-carcinogen with dermal, oral, and inhalation exposure potential causing irritation, detected in one TAT sample.

6.0 REMOVAL ACTIONS

Mitigation of the threats described above requires the removal and disposal of approximately 7,500 gallons of liquid waste from various drums, vats, tanks and smaller containers, approximately forty 55-gallon drums of sludge and solids, and approximately 40 cubic yards of contaminated debris. In addition, approximately 50-cubic yards of floor solids and contaminated soil require removal. The following subsections present major activities associated with a two-phase removal action plan.

6.1 Removal Action-Phase I

Phase I removal actions would begin with the mobilization of the Emergency Response Cleanup Contractor (ERCS) to the site and the development of a site safety plan. Subsequent to these initial actions, the ERCS contractor would collect a sample from all vats, tanks, and drums containing known or suspected hazardous waste. The TAT would then conduct field compatibility tests on all samples to determine composites for disposal analysis. Based on available information, identification of the following waste streams is anticipated during the compatibility tests:

- acid oxidizing liquids
- acid oxidizing solids
- base/neutral liquids
- base/neutral solids
- cyanide liquids
- cyanide solids
- caustic liquids
- caustic solids

Concurrent with the compatibility testing, ERCS would secure any deteriorated drums or containers into 85-gallon overpack drums. Following compatibility testing and compositing, samples would be sent U.S. EPA-approved disposal facilities for acceptance.

6.2 Removal Action-Phase II

Phase II of the removal action would consist of transportation and disposal of the anticipated waste streams identified in section 6.1. For cost purposes, it was assumed that the wastes would be transported to the Cyanokem facility in Detroit, Michigan for treatment, and to Chemical Waste Management, Calumet City, Illinois for landfilling. Following removal of hazardous materials, decontamination and removal of vats and tanks will be performed, and the building decontaminated and possibly demolished.

7.0 ESTIMATED COSTS

The cost estimate prepared for the mitigation of threats at the Automatic Industrial Plating site addresses the removal of liquid, sludge, and solid wastes. The costs associated with this removal include sample collection, compatibility testing, waste stream development, bulking of the waste streams, waste transportation and disposal, and decontamination of vats and the buildings. The removal action is estimated to require thirty 12-hour days and cost approximately \$576,170. The cost estimate generated by the Removal Cost Management System (RCMS) and a list of assumptions are presented in Appendix A.

The cost estimate was generated with RCMS using rates from the ERCS contractor OH Materials. Estimated costs for treatment of hazardous liquids and solids were obtained from Cyanokem, Detroit, Michigan. Estimates for landfill of contaminated debris, soil and floor solids were obtained from Chemical Waste Management, Calumet City, Illinois.

The proposed work plan includes the following tasks:

1. Mobilization to the site - 1 day.
2. Staging, sampling, and compatibility testing of all waste streams - 13 days.
3. Demobilization - 1 day.
4. Bulking of waste and transportation of waste streams off-site - 10 days.
5. Decontamination of vats and floors and possible building demolition - 5 days.
6. Final demobilization - 1 day.

APPENDIX A
COST ESTIMATE

**ASSUMPTIONS USED FOR THE COST PROJECTION
FOR THE REMOVAL AT AUTOMATIC INDUSTRIAL PLATING**

1. 7,500 gallons of liquid waste consolidated into 4 waste streams and transported for treatment at CyanoKem, Detroit, Michigan.
2. Forty 55-gallon drums of solid waste consolidated into 4 waste streams and transported for treatment at CyanoKem, Detroit, Michigan.
3. Demolition of the building requiring removal of 20 cubic yards of contaminated debris (including PPE), 900 cubic yards of non-hazardous debris, and 50 cubic yards of contaminated soil.
4. Contaminated debris and soil transported for landfill at CWM-CID, Calumet City, Illinois. Non-hazardous debris transported to a local sanitary landfill.
5. Removal activities concluded after 30, 12-hour days.

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Summary Report
Initial Cost Projection Scenario: AIP COST PROJECTION

Page: 1

Projection ID Number: IL0763SA
Cleanup Contractor: 1019 - OH MATERIALS

Date: 01/14/92
TAT Contractor: E & E INC.

=====

Cost Projection Summary

=====

Contractor Personnel	132,467.15
Contractor Equipment	23,748.80
Unit Rate Materials	21,152.93
At Cost Materials	120.90
Subcontractors	26,755.17
Waste Transportation	15,717.00
Waste Disposal	113,948.25

Cleanup Contractor Subtotal	333,910.20
Federal and State Agencies	0.00

Extramural Subtotal	333,910.20
20 % Extramural Contingency	66,782.04

Extramural Subtotal	400,692.24
TAT Personnel	45,750.00
TAT Special Projects	0.00
TAT Analytical Services	0.00

Total TAT Costs	45,750.00
Other Cost Items	0.00

Extramural Subtotal	446,442.24
20 % Project Contingency	89,288.45

Total Extramural Cost	535,730.69
EPA Regional Personnel	17,370.00
EPA Non-Regional Personnel	0.00
EPA Headquarters Direct	0.00
(0 % of Regional Hours)	
EPA Indirect	14,400.00

EPA Total	31,770.00

Project Total	567,500.69

Detailed Report By Category
Initial Cost Projection Scenario: AIP COST PROJECTION

Page: 1

Projection ID Number: IL0763SA

Date: 01/14/92

Cleanup Contractor: 1019 - OH MATERIALS

TAT Contractor: E & E INC.

Cost Projection Detail - By Category

Contractor Personnel

Job Category	Number of Employees	Number of Days	Hrs per Day	Labor	PD, Lodge Travel	Total Charge

000 - GENERAL SITE COSTS						

001-SUPERVISOR 1	1	30	12.00	16,521.60	2,364.40	18,886.00
003-CLEANUP TECH-HAZ	4	30	12.00	56,467.20	9,457.60	65,924.80
005-EQUIP OPERATOR	1	15	12.00	8,110.20	1,288.79	9,398.99
006-TRUCK DRIVER	2	4	12.00	4,325.44	782.00	5,107.44
013-FLD CLERK/TYPIST	1	30	12.00	12,616.80	2,364.40	14,981.20
015-CHEMIST ORGANIC 2	1	30	12.00	15,170.40	2,998.32	18,168.72

Total for GENERAL SITE COSTS :						132,467.15

Total personnel cost: 132,467.15

Contractor Equipment

Equipment Name	Number Needed	Reg Days	Hours /day	Stby Days	Mob/Demob Days	Decon Days	Mileage	Total Charge

000 - GENERAL SITE COSTS								

210-AIR COMPRESSOR	1	15	12.00	0	0	0	N/A	940.12
298-COMPUTER PORTABLE-PC	1	30	12.00	0	0	0	N/A	862.73
043-TRUCK PICK UP	2	30	12.00	0	0	0	N/A	1,142.68
062-TRLR DECON 8X25	1	30	12.00	0	0	0	N/A	1,952.38
076-BACKHOE CAT 225	1	10	12.00	0	0	0	N/A	5,263.02
124-ANYL OVA-FID	1	30	12.00	0	0	0	N/A	1,146.36
140-TANK PORTABLE HOLD	3	10	12.00	0	0	0	N/A	1,756.59
166-GENERATOR 10 KW	1	30	12.00	0	0	0	N/A	679.46
205-ANYL CYANIDE MONITOR	1	30	12.00	0	0	0	N/A	514.82
212-LASER WATER HIGH PR	1	15	12.00	0	0	0	N/A	3,160.93
222-MANLIFT	1	15	12.00	0	0	0	N/A	1,600.00
266-LOWBOY, 9 TON (HT)	1	4	12.00	0	4	0	N/A	965.49
333-CHOPSAW	2	15	12.00	0	0	0	N/A	660.00
990-BOBCAT	1	15	12.00	0	0	0	N/A	1,020.00
992-PASSENGER VAN	1	30	12.00	0	0	0	N/A	942.00
999-BREAKER HAMMER 90LB	1	15	12.00	0	0	0	N/A	330.00
195-DBL.DIAPH.PUMP(2"SS)	1	15	12.00	0	0	0	N/A	812.22

Total for GENERAL SITE COSTS :								23,748.80

Detailed Report By Category (cont.)
Initial Cost Projection Scenario: AIP COST PROJECTION

Page: 2

Projection ID Number: IL0763SA

Date: 01/14/92

Cleanup Contractor: 1019 - OH MATERIALS

TAT Contractor: E & E INC.

Contractor Equipment

Equipment Name	Number Needed	Reg Days	Hours /day	Stby Days	Mob/Demob Days	Decon Days	Mileage	Total Charge
----------------	---------------	----------	------------	-----------	----------------	------------	---------	--------------

Total equipment cost: 23,748.80

Unit Rate Materials

Material Name	Material Use	Unit Cost	Number of Units	Total Charge
000 - GENERAL SITE COSTS				
BREATHING AIR	SCBA	18.000	50.0 SCBA	1,088.10
COMPAT. SUPPLIES	COMPATIBILITY	10.000	20.0 EACH	241.80
COOLER	SAMPLING	30.000	10.0 COOLER	362.70
DECON WATER	DECON	0.500	500.0 GALLON	302.25
DIESEL FUEL	EQUIPMENT	1.350	100.0 GALLON	163.22
DRUM THIEVES	SAMPLING	3.000	200.0 EACH	725.40
GASOLINE	VEHICLES	1.400	150.0 GALLONS	253.89
HYPOCHLORITE	DECON	1.500	150.0 GALLON	272.03
ICE	SAMPLING	1.500	10.0 ICE	18.14
NAILS	JOINING	1.500	10.0 LBS	18.14
OPEN-HEAD DRUMS	SLUDGE	25.000	50.0 DRUM	1,511.25
OVERPACKS	OVERPACKING	110.000	20.0 DRUM	2,659.80
PPE	PROTECTION	85.000	120.0 MAN/DAY	12,331.80
SAMPLE JARS	SAMPLES	0.500	200.0 EACH	120.90
TROWEL	SAMPLING	3.000	10.0 TROWEL	36.27
VERMICULITE	SAMPLING	6.620	10.0 BAG	80.04
VISQUEEN	LINE TRUCKS	30.000	10.0 ROLL	362.70
55-GALLON POLY	TRANSFER	50.000	10.0	604.50

Total for GENERAL SITE COSTS : 21,152.93

Total unit rate materials cost: 21,152.93

At Cost Materials

Material Name	Material Use	Quantity/Amount	Total Charge
000 - GENERAL SITE COSTS			
OFFICE SUPPLIES	OFFICE	1	120.90

Total for GENERAL SITE COSTS : 120.90

Detailed Report By Category (cont.)
Initial Cost Projection Scenario: AIP COST PROJECTION

Page: 3

Projection ID Number: IL0763SA

Date: 01/14/92

Cleanup Contractor: 1019 - OH MATERIALS

TAT Contractor: E & E INC.

At Cost Materials

Material Name	Material Use	Quantity/Amount	Total Charge

Total at cost materials cost:			120.90

Subcontractors

Subcontractor	Service	Billing	Total Charge

000 - GENERAL SITE COSTS			

ACME SECURITY	SECURITY	200.0 HOURS	2,418.00
LAB ANALYTICAL	ANALYTICAL SAMPLE	10.0 SAMPLE	12,090.00
PORT-A-LET	PORTABLE TOILET	4.0 MONTH	822.12
CYANOKEM	DISPOSAL ACCEPTN	15.0 SAMPLE	5,440.50
CHEM. WASTE MANG.	DISPOSAL ACCEPT.	15.0 SAMPLE	5,440.50
COMMONWEALTH EDISON	ELECTRIC SERVICE	1.0 MONTHS	181.35
ILLINOIS BELL	PHONE SERVICE	1.0 MONTH	181.35
WATER SUPLIER	DRINKING WATER	1.0 MONTH	60.45
RENTAL COMPANY	FAX/COPIER	1.0 MONTH	120.90

Total for GENERAL SITE COSTS :			26,755.17

Total subcontractor cost:			26,755.17

Waste Transportation

Waste Type	Amount	Loads	Cost Per Mile	Miles	Total Charge

000 - GENERAL SITE COSTS					

ACID OX. LIQUID	3,000 GAL	1	4.00	300	1,450.80
ACID OX. SOLID	10 55 GAL	1	4.00	300	1,450.80
B/N LIQUIDS	2,000 GAL	1	4.00	300	1,450.80
B/N SOLIDS	20 55 GAL	1	4.00	300	1,450.80
CAUSTIC LIQUID	1,000 GAL	1	4.00	300	1,450.80
CAUSTIC SOLID	5 55 GAL	1	4.00	300	1,450.80
CONT. SOIL	50 CU YDS	2	4.00	50	483.60
CONTAM. DEBRIS	20 CU YDS	1	4.00	50	241.80
CYANIDE LIQUID	1,500 GAL	1	4.00	300	1,450.80
CYANIDE SOLIDS	5 55 GAL	1	4.00	300	1,450.80
NON-HAZ DEBRIS	900 CU YDS	30	4.00	20	2,901.60
ORGANIC	10 55 GAL	1	4.00	100	483.60

Total for GENERAL SITE COSTS :					15,717.00

Detailed Report By Category (cont.)
Initial Cost Projection Scenario: AIP COST PROJECTION

Page: 4

Projection ID Number: IL0763SA
Cleanup Contractor: 1019 - OH MATERIALS

Date: 01/14/92
TAT Contractor: E & E INC.

Waste Transportation

Waste Type	Amount	Loads	Cost Per Mile	Miles	Total Charge
-----					-----
Total transportation cost:					15,717.00

Waste Disposal

Waste Type	Disposal Method	Units	No. of Units	Unit Cost	Total Charge

000 - GENERAL SITE COSTS					

ACID OXID. SOL.	TREATMENT	DRUMS	10	650.00	7,858.50
ACID OXID. LIQ.	TREATMENT	GALLONS	3000	2.00	7,254.00
B/N LIQUID	TREATMENT	GALLONS	2000	1.50	3,627.00
B/N SOLIDS	TREATMENT	DRUMS	20	350.00	8,463.00
CAUSTIC LIQUIDS	TREATMENT	GALLONS	1000	5.00	6,045.00
CAUSTIC SOLIDS	TREATMENT	DRUMS	5	350.00	2,115.75
CONTAM. DEBRIS	LANDFILL	CU YD	20	350.00	8,463.00
CONTAM. SOIL	LANDFILL	CU YD	50	250.00	15,112.50
CYANIDE LIQUID	TREATMENT	GALLONS	1500	9.00	16,321.50
CYANIDE SOLIDS	TREATMENT	DRUMS	5	900.00	5,440.50
NON-HAZ DEBRIS	LANDFILL	CU YD	900	25.00	27,202.50
ORGANIC LIQUIDS	INCINERATION	DRUMS	10	500.00	6,045.00
-----					-----
Total for GENERAL SITE COSTS :					113,948.25
-----					-----
Total disposal cost:					113,948.25

Federal and State Agencies 0.00

20 % Extramural Contingency: 66,782.04

TAT Personnel

Level	Number of Days	Hrs per Day	Hourly Rate	Labor	PD, Lodge Travel	Total Charge

000 - GENERAL SITE COSTS						

ADM	15	8.00	40.00	12,000.00	0.00	12,000.00
PL2	15	12.00	35.00	15,750.00	0.00	15,750.00
PL3	15	12.00	40.00	18,000.00	0.00	18,000.00
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Total for GENERAL SITE COSTS :						45,750.00

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Detailed Report By Category (cont.)

Initial Cost Projection Scenario: AIP COST PROJECTION

Page: 5

Projection ID Number: IL0763SA
 Cleanup Contractor: 1019 - OH MATERIALS

Date: 01/14/92
 TAT Contractor: E & E INC.

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TAT Personnel

Level	Number of Days	Hrs per Day	Hourly Rate	Labor	PD, Lodge Travel	Total Charge
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Total TAT personnel cost: 45,750.00

TAT Special Projects 0.00

TAT Analytical Services 0.00

Other Costs 0.00

20 % Project Contingency: 89,288.45

EPA Regional Personnel

Title	Number of Days	Hrs per Day	Hourly Rate	Labor	PD, Lodge Travel	Total Charge
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000 - GENERAL SITE COSTS

OSC	30	12.00	30.00	10,800.00	1,980.00	12,780.00
OSC	15	8.00	30.00	3,600.00	990.00	4,590.00

Total for GENERAL SITE COSTS : 17,370.00

Total EPA Regional Personnel Cost: 17,370.00

EPA Headquarters Cost: 0.00
 (0 % of Regional hours)

EPA Indirect Cost: 14,400.00
 (480 hours @ \$30.00 per hour)

EPA Non-Regional Personnel 0.00

Total EPA Cost: 17,370.00

Total site cost: 553,100.69

APPENDIX B
SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: AUTOMATIC INDUSTRIAL PLATING PAGE 1 OF 4
U.S. EPA ID: PV TDD: T05-9112-026 PAN: EILO763SAA

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
NORTH

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: EXISTING SITE CONDITION AS VIEWED FROM INSIDE
OVERHEAD DOOR.

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
NORTHWEST

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: EXISTING SITE CONDITION AS VIEWED FROM INSIDE
OVERHEAD DOOR.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: AUTOMATIC INDUSTRIAL PLATING PAGE 2 OF 4
U.S. EPA ID: PV TDD: T05-9112-026 PAN: EILO763SAA

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
NORTH

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: VIEW OF EXISTING PLATING LINE.

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
NORTHEAST

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: VIEW OF EAST SIDE OF PLATING LINE.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: AUTOMATIC INDUSTRIAL PLATING PAGE 3 OF 4
U.S. EPA ID: PV TDD: T05-9112-026 PAN: EILO763SAA

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
WEST

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: LEAKING VAT WITH LOW pH.

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
WEST

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: DETERIORATED CATWALK IN PLATING LINE WITH PLATING SLUDGES.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: AUTOMATIC INDUSTRIAL PLATING PAGE 4 OF 4
U.S. EPA ID: PV TDD: T05-9112-026 PAN: EILO763SAA

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
WEST

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
VS-4



DESCRIPTION: VAT IN PLATING LINE LABELED CAUSTIC.

DATE: 12/20/91

TIME: 13:00

DIRECTION OF
PHOTOGRAPH:
SOUTH

WEATHER
CONDITIONS:
RAINING/COLD

PHOTOGRAPHED BY:
WENDEL

SAMPLE ID
(if applicable):
>



DESCRIPTION: STORED, BULGING DRUMS, LABELED ACIDS.
SLUDGES.